

Count on us!

ICOM

INSTRUCTION MANUAL

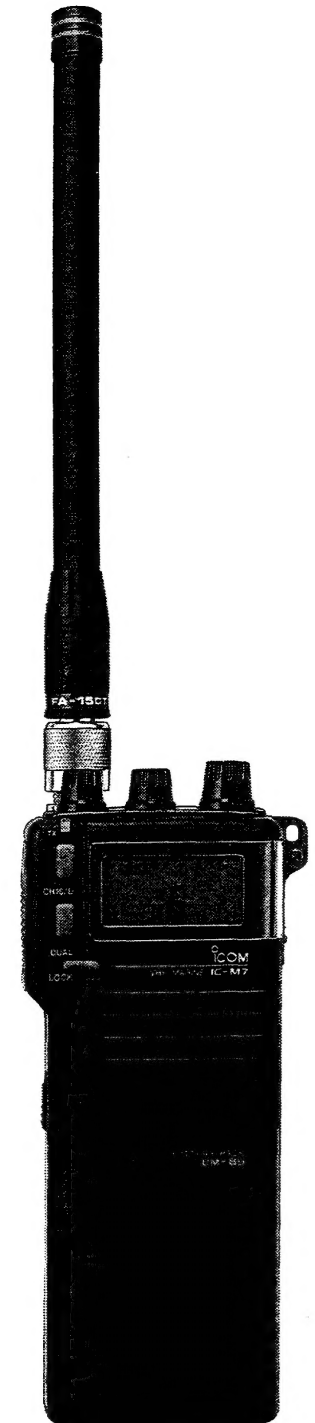
VHF MARINE TRANSCEIVER

IC-M7

A-5089S-1US-①  
Printed in Japan  
Copyright © 1991 by Icom Inc.

Icom Inc.  
6-9-16, Kamihigashi, Hirano-ku, Osaka 547, Japan

Icom Inc.



---

## IMPORTANT

---

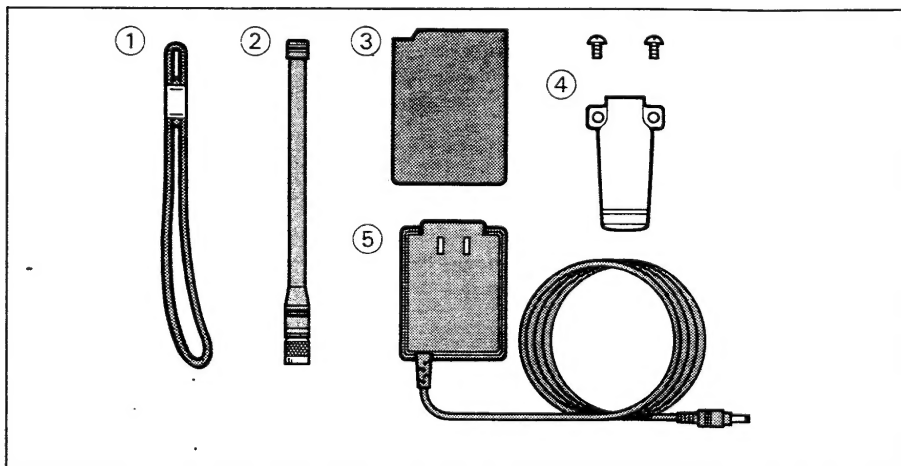
**READ ALL INSTRUCTIONS** carefully and completely before using the transceiver.

**SAVE THIS INSTRUCTION MANUAL** — This instruction manual contains important safety and operating instructions for the IC-M7.

---

## UNPACKING

---



Accessories included with the IC-M7:	Qty.
① Handstrap .....	1
② Flexible antenna (FA-150T) .....	1
③ Battery pack (CM-89) .....	1
④ Belt clip and screws .....	1 set
⑤ Wall charger (BM-76A) .....	1

---

## CAUTIONS

---

**NEVER** connect the transceiver via the [CHARGE] jack to an AC outlet or to a power source of more than 20 V DC. These connections will ruin the transceiver.

**NEVER** allow children to touch the transceiver.

**NEVER** disassemble the transceiver. Incorrect reassembly may result in damage to the transceiver. Any services regarding the transceiver must be done by a person who has an authorized license.

**NEVER** expose the transceiver to rain, snow or any liquids.

**AVOID** using the transceiver in areas with temperatures below  $-20^{\circ}\text{C}$  or above  $+60^{\circ}\text{C}$ . The transceiver may operate incorrectly.

**AVOID** the use of chemical agents such as benzene or alcohol when cleaning, as they can damage the transceiver surfaces.

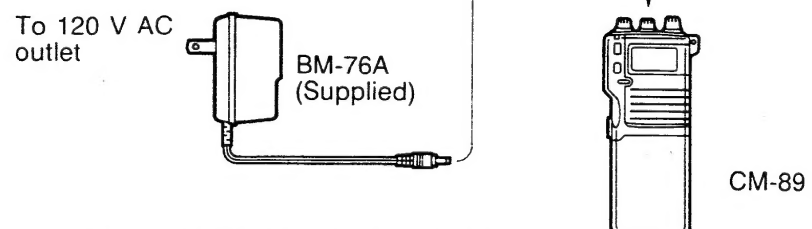
**BE CAREFUL !** The [CHARGE] jack on the transceiver cannot be used for transceiver operations. Use only a battery pack as a power supply.

**BE CAREFUL!** In case the transceiver is soaked in water or saline water, the transceiver cannot be repaired.

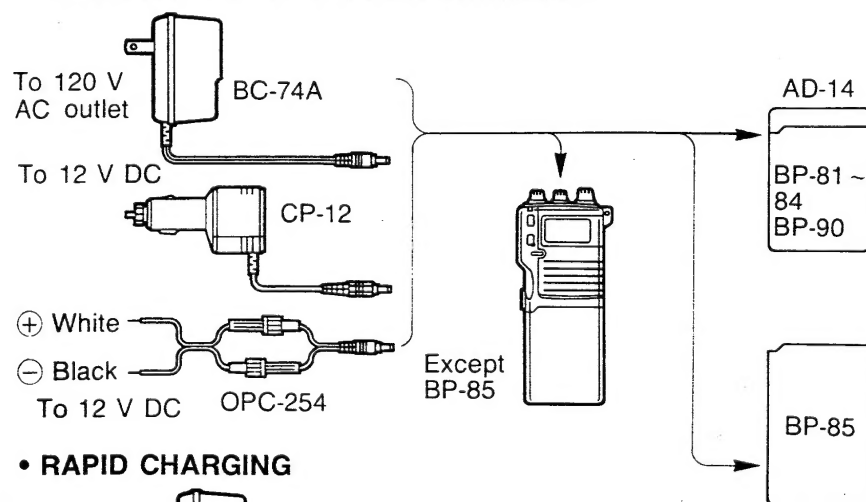
The use of non-Icom battery packs/chargers may impair transceiver performance and invalidate the warranty.

## ■ Charging a battery pack

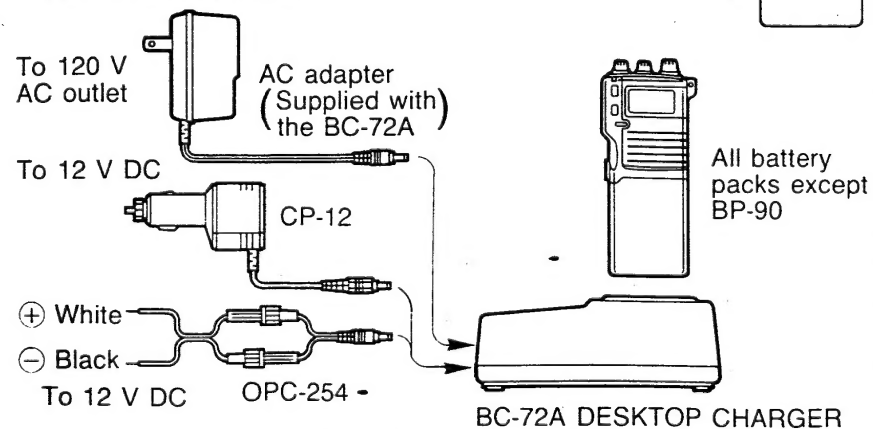
### • CM-89 (SUPPLIED) CHARGING



### • BP SERIES BATTERY PACK CHARGING



### • RAPID CHARGING



**USE ONLY one charger.**

## ■ Charging precautions

**NEVER** attempt to charge dry batteries with the BP-90. Replace the batteries with new ones when the batteries become empty.

**NEVER** obstruct the holes on the bottom of the battery pack when charging with the BC-72A.

**AVOID** charging in extreme cold (under 0°C) or extreme heat (over +40°C).

## ■ Using the battery pack wisely

The battery pack is designed to withstand recharging periods longer than 1 week or more and can be fully discharged. However, overcharging or complete discharging shorten the life of a battery. The battery pack can be recharged about 300 times but its battery life can be lengthened to about 500 times as follows:

- 1) Avoid overcharging. Charging times should be less than 48 hours.
- 2) Use battery capacity almost completely under normal operation. Charge a battery after transmitting becomes impossible.

## ■ Charging period

CHARGER	CM-89	BP-81, BP-82	BP-83, BP-84	BP-85
BM-76A	15 hrs.	N/A	N/A	N/A
BC-72A	1.5 hrs.	1 hr.	1 hr.	1.5 hrs.
BC-74A	N/A	15 hrs.	15 hrs.	15 hrs.

N/A: Not Applicable

**CAUTION:** After charging be sure to insert the jack cap to prevent bat contact caused by dust.

# 1 OPERATING RULES

## ■ Priorities

- 1) Read all rules and regulations related to priorities, and keep an up-to-date copy handy. Safety and distress calls take priority over all others.
- 2) You **MUST** monitor Channel 16 while you do not operate on another channel.
- 3) It is unlawful and prohibited to transmit false or fraudulent distress calls.

## ■ Call procedures

Calls must be properly identified and time limits must be respected.

- 1) Give your call sign each time you call another vessel or coast station.
  - If you have no call sign, identify the station by giving the vessel name and the name of the licensee.
- 2) Give your call sign at the end of each transmission of more than 3 minutes duration.
- 3) You must break and give your call sign at least once every 15 min. during long ship-to-shore calls.
- 4) Keep your unanswered calls short (less than 30 sec.) and do not repeat a call for 2 min.
- 5) Unnecessary transmissions are not allowed.

## ■ Privacy

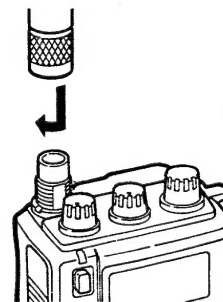
- 1) Information overheard but not intended for you cannot lawfully be used in any way.
- 2) Indecent or profane language is prohibited.

# 2 PRE-OPERATION

## ■ Attaching accessories

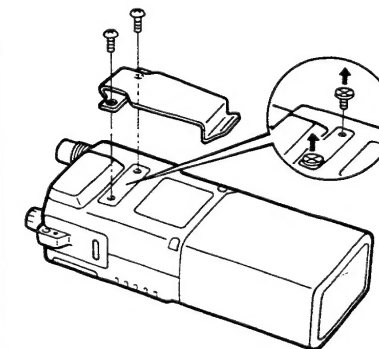
### • ANTENNA INSTALLATION

Insert the antenna onto the antenna connector and screw down the connector.



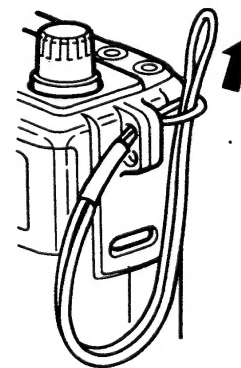
### • BELT CLIP ATTACHMENT

The belt clip allows you to attach the transceiver to your belt. Remove the plastic screws when attaching the belt clip.



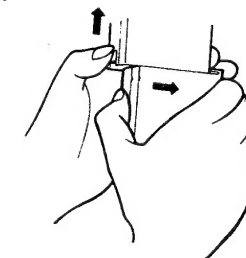
### • HANDSTRAP ATTACHMENT

The handstrap allows you to easily carry the transceiver.



### • BATTERY PACK REMOVAL

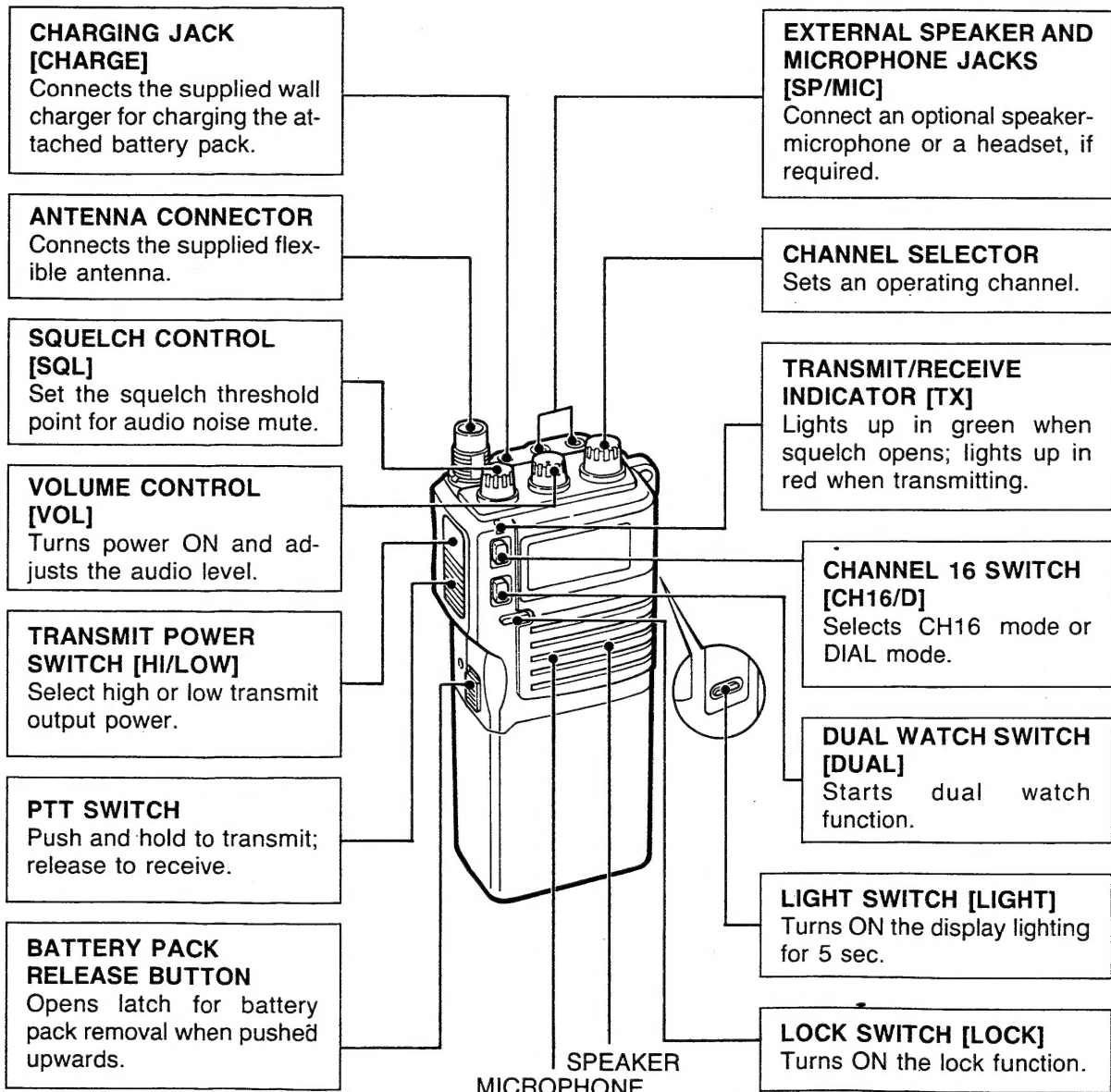
Push and hold the battery pack release button upwards, then slide the battery pack. To attach the battery pack, mate the notched ends of the transceiver and the battery pack, and slide until a click sound is heard.



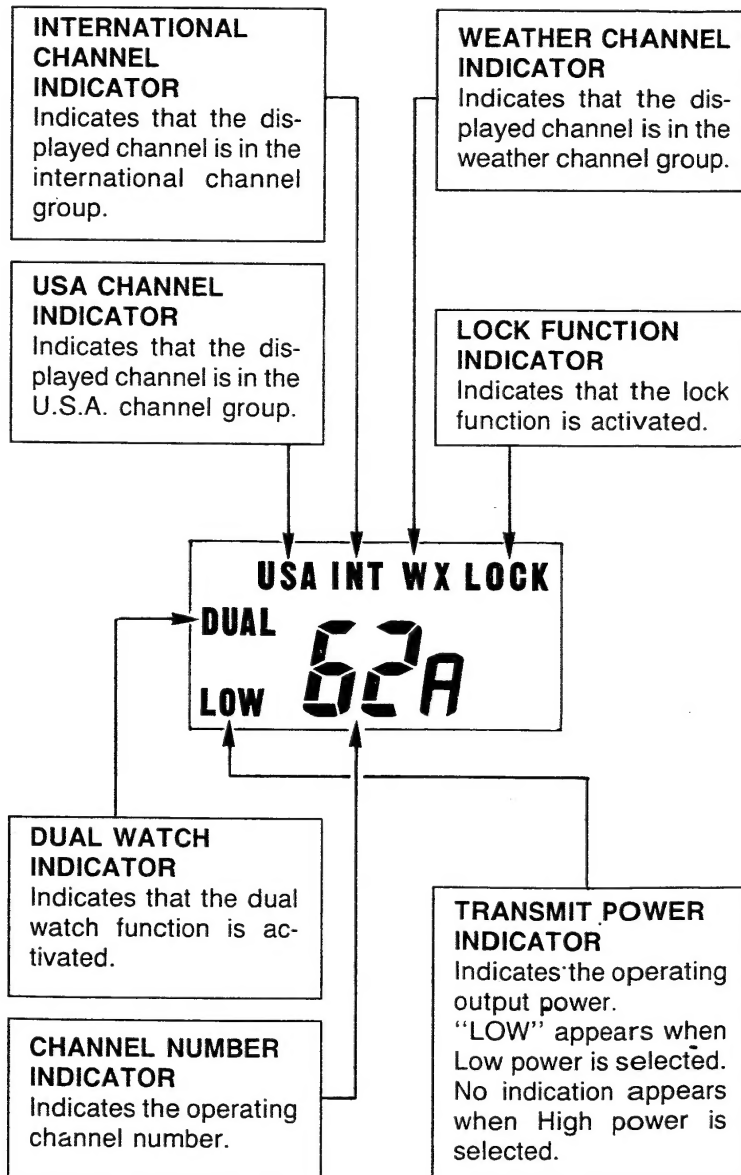
# 3

## PANEL DESCRIPTION

### ■ Switches and controls



### ■ Function display



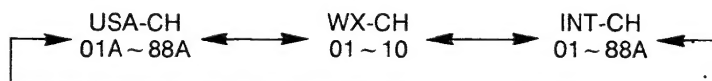
# 4 RECEIVING

## ■ Receiving Channel 16 (CH 16 mode)

- 1) Rotate [VOL] to turn power ON.
- 2) Rotate [SQL] fully counterclockwise.
- 3) Adjust the audio level using [VOL].
- 4) Turn [SQL] clockwise until noise disappears.
- 5) Push [CH16/D] to select Channel 16 when channels other than Channel 16 appear.
- 6) When receiving a signal, the squelch opens and audio is emitted from the speaker.
  - [TX] lights up in green.

## ■ Receiving a channel (DIAL mode)

- 1) Rotate [VOL] to turn power ON.
- 2) Set squelch and volume as described above.
- 3) Push [CH16/D] to select DIAL mode.
- 4) Select the desired channel using the channel selector.
  - Channels are changed as shown in the chart below.



- 5) When the transceiver receives signals on the channel, the squelch opens and audio is emitted from the speaker.
  - [TX] lights up in green.

## ■ Watching two frequencies

The transceiver has a dual watch function which automatically receives Channel 16 while operating on another channel. If the transceiver receives the signal on Channel 16, the dual watch function continues to receive Channel 16 until the signal disappears.

- 1) Set an operating channel (other than Channel 16).
- 2) Push [DUAL].
  - "DUAL" blinks.
  - The operating channel cannot be changed while the dual watch function is activated.
- 3) To cancel the function, push [DUAL] or [CH16/D].
  - When pushing DUAL: returns to the operating channel.
  - When pushing [CH16/D]: switches to Channel 16.

## ■ Lock function

The lock function electronically locks the channel selector and the [DUAL] switch to prevent accidental channel changes.

- 1) Set an operating channel.
- 2) Push [LOCK].
  - "LOCK" appears.
- 3) To cancel the function, push [LOCK] again.

**NOTE:** Channel 16 can be recalled with [CH16/D] even when the lock function is activated. In this case, the lock function is canceled automatically.



# 5 TRANSMITTING

**CAUTION:** Transmitting without an antenna may damage the transceiver.

- 1) Set the desired channel using the channel selector.
- 2) Push [HI/LOW] to select the output power.
  - “LOW” appears when selecting low power and disappears when selecting high power.
  - “LOW”: Ensures you longer operation times.
  - “HI” : Ensures you longer distance communications.
- 3) Push and hold the PTT switch to transmit.
  - [TX] lights up in red.
- 4) Speak into the microphone.
  - DO NOT hold the transceiver too closely to your mouth or speak too loudly. This may distort the signal.
- 5) Release the PTT switch to receive.

**NOTE:** The following channels are receive only channels or low power only channels.

Receive only channels : WX-CHs 01 ~ 10 and USA-CH 15.  
 Low output power channels : USA-CHs 17 and 70.  
 INT-CHs 15, 17 and 70.

# 6 FREQUENCY CHART

Channel No.	Frequency (MHz)		Transmitter output power
	Transmit	Receive	
01	156.050	160.650	5 W & 0.5 W
01A	156.050	156.050	5 W & 0.5 W
02	156.100	160.700	5 W & 0.5 W
02A	156.100	156.100	5 W & 0.5 W
03	156.150	160.750	5 W & 0.5 W
03A	156.150	156.150	5 W & 0.5 W
04	156.200	160.800	5 W & 0.5 W
04A	156.200	156.200	5 W & 0.5 W
05	156.250	160.850	5 W & 0.5 W
05A	156.250	156.250	5 W & 0.5 W
06	156.300	156.300	5 W & 0.5 W
07	156.350	160.950	5 W & 0.5 W
07A	156.350	156.350	5 W & 0.5 W
08	156.400	156.400	5 W & 0.5 W
09	156.450	156.450	5 W & 0.5 W
10	156.500	156.500	5 W & 0.5 W
11	156.550	156.550	5 W & 0.5 W
12	156.600	156.600	5 W & 0.5 W
13	156.650	156.650	5 W & 0.5 W
14	156.700	156.700	5 W & 0.5 W
15	156.750	156.750	0.5 W only
16	156.800	156.800	5 W & 0.5 W
17	156.850	156.850	0.5 W only
18	156.900	161.500	5 W & 0.5 W
18A	156.900	156.900	5 W & 0.5 W
19	156.950	161.550	5 W & 0.5 W
19A	156.950	156.950	5 W & 0.5 W
20	157.000	161.600	5 W & 0.5 W
20A	157.000	157.000	5 W & 0.5 W
21	157.050	161.650	5 W & 0.5 W
21A	157.050	157.050	5 W & 0.5 W
22	157.100	161.700	5 W & 0.5 W
22A	157.100	157.100	5 W & 0.5 W
23	157.150	161.750	5 W & 0.5 W
23A	157.150	157.150	5 W & 0.5 W
24	157.200	161.800	5 W & 0.5 W
25	157.250	161.850	5 W & 0.5 W
26	157.300	161.900	5 W & 0.5 W
27	157.350	161.950	5 W & 0.5 W
28	157.400	162.000	5 W & 0.5 W
60	156.025	160.625	5 W & 0.5 W
60A	156.025	156.025	5 W & 0.5 W
61	156.075	160.675	5 W & 0.5 W
61A	156.075	156.075	5 W & 0.5 W
62	156.125	160.725	5 W & 0.5 W
62A	156.125	156.125	5 W & 0.5 W
63	156.175	160.775	5 W & 0.5 W
63A	156.175	156.175	5 W & 0.5 W
64	156.225	160.825	5 W & 0.5 W

Channel No.	Frequency (MHz)		Transmitter output power
	Transmit	Receive	
64A	156.225	156.225	5 W & 0.5 W
65	156.275	160.875	5 W & 0.5 W
65A	156.275	156.275	5 W & 0.5 W
66	156.325	160.925	5 W & 0.5 W
66A	156.325	156.325	5 W & 0.5 W
67	156.375	156.375	5 W & 0.5 W
68	156.425	156.425	5 W & 0.5 W
69	156.475	156.475	5 W & 0.5 W
70	156.525	156.525	0.5 W only
71	156.575	156.575	5 W & 0.5 W
72	156.625	156.625	5 W & 0.5 W
73	156.675	156.675	5 W & 0.5 W
74	156.725	156.725	5 W & 0.5 W
75	—	—	Guard
76	—	—	Guard
77	156.875	156.875	5 W & 0.5 W
78	156.925	161.525	5 W & 0.5 W
78A	156.925	156.925	5 W & 0.5 W
79	156.975	161.575	5 W & 0.5 W
79A	156.975	156.975	5 W & 0.5 W
80	157.025	161.625	5 W & 0.5 W
80A	157.025	157.025	5 W & 0.5 W
81	157.075	161.675	5 W & 0.5 W
81A	157.075	157.075	5 W & 0.5 W
82	157.125	161.725	5 W & 0.5 W
82A	157.125	157.125	5 W & 0.5 W
83	157.175	161.775	5 W & 0.5 W
83A	157.175	157.175	5 W & 0.5 W
84	157.225	161.825	5 W & 0.5 W
84A	157.225	157.225	5 W & 0.5 W
85	157.275	161.875	5 W & 0.5 W
85A	157.275	157.275	5 W & 0.5 W
86	157.325	161.925	5 W & 0.5 W
86A	157.325	157.325	5 W & 0.5 W
87	157.375	161.975	5 W & 0.5 W
87A	157.375	157.375	5 W & 0.5 W
88	157.425	162.025	5 W & 0.5 W
88A	157.425	157.425	5 W & 0.5 W
WX01	—	162.550	RX only
WX02	—	162.400	RX only
WX03	—	162.475	RX only
WX04	—	162.425	RX only
WX05	—	162.450	RX only
WX06	—	162.500	RX only
WX07	—	162.525	RX only
WX08	—	161.650	RX only
WX09	—	161.775	RX only
WX10	—	163.275	RX only

Transmitter output power varies depending on battery packs.

PROBLEM	POSSIBLE CAUSE	SOLUTION
• Power does not come on when the power is turned ON.	• The battery is exhausted. • Bad connection of the battery pack.	• Recharge the battery pack. • Check the battery pack attachment to the transceiver.
• No sound comes from the speaker.	• [SQL] is turned too far CW. • External speaker (or earphone) is in use. • [VOL] is turned completely CCW.	• Set [SQL] at the threshold point. • Remove the speaker plug from the transceiver. If sounds come from the transceiver, the external speaker is bad. • Set [VOL] to a suitable listening level.
• No or low transmit output power.	• The battery is exhausted. • The output power is set at low. • The transceiver has selected Channel 15, 17 or 70.	• Push PTT. If the red transmit indicator does not light up, recharge the battery pack. • Check the "LOW" indicator on the display. If illuminated, push [HI/LOW] to select HIGH output power. • The transceiver transmits only low output power on Channels 15, 17 or 70.
• The display channel does not change.	• The display is in the locked condition. • The transceiver has selected Channel 16 mode.	• Check "LOCK" indicator. If illuminated, push [LOCK] to cancel the condition. • Push [CH16/D] to return to DIAL mode.
• Function display occasionally displays erroneous information.	• The internal microprocessor has malfunctioned.	• Turn power OFF then turn power ON again. If no solution is found, see CPU resetting below.

CW: Clockwise

CCW: Counterclockwise

### ■ Resetting the CPU

When the function display displays erroneous information, the CPU should be reset before sending the transceiver to an Icom Dealer or Service Center.

**NOTE:** After resetting the CPU, all informations you have programmed into memory channels will be erased.

- 1) Turn power ON.
- 2) While pushing [HI/LOW] and [LOCK], turn power OFF and ON again.
- 3) Push [CH16/D] to select DIAL mode.

### ■ Battery packs

BATTERY PACK	OUTPUT VOLTAGE	CAPACITY
BP-81	7.2 V	110 mAh
BP-82	7.2 V	300 mAh
BP-83	7.2 V	600 mAh
BP-84	7.2 V	1000 mAh
BP-85	12.0 V	340 mAh
BP-90	Case for six R6 (AA) size batteries	
CM-89	9.6 V	300 mAh

### ■ Chargers and charging cables

**BC-72A DESKTOP CHARGER** For rapid charging.

**BC-74A WALL CHARGER** For charging BP-81 ~ BP-90.

**BM-76A WALL CHARGER** For charging CM-89.

**CP-12 CIGARETTE LIGHTER CABLE WITH NOISE FILTER** For charging BP-81 ~ BP-90.

**OPC-254 MINI DC POWER CABLE** For charging BP-81 ~ BP-90.

### ■ Carrying cases

**LC-53 CARRYING CASE** For IC-M7 with BP-81.

**LC-55 CARRYING CASE** For IC-M7 with BP-82, BP-83, BP-90 or CM-89.

**LC-56 CARRYING CASE** For IC-M7 with BP-84 or BP-85.

**LC-67 WATERPROOF BAG** Protects the transceiver from rain or mist.

### ■ Other options

**AD-14. BATTERY CHARGE ADAPTER** Use when battery pack (BP-81 ~ BP-84, BP-90) charging without a transceiver.

**CM-9 SPEAKER-MICROPHONE** Combination speaker and microphone.

**EM-46 SPEAKER-MICROPHONE** Combination speaker and microphone equipped with an earphone jack.

**FA-150T FLEXIBLE ANTENNA** Same type as supplied with the IC-M7.

**FA-150TA FLEXIBLE ANTENNA** Short-type antenna.

**HM-54 SPEAKER-MICROPHONE** Combination speaker and microphone.

**HS-51 HEADSET** Light headset with VOX function.

**MB-30 MOUNTING BRACKET** Mounts the transceiver on a wall.